CLAIMS:

1. A biological sample storage rack comprising;

a housing in which a plurality of tubes containing the biological sample are located, the tubes having a main body being cylindrical in shape;

at least one mounting member on the housing having a horizontal axis; and

a plurality of holes on the mounting member for receiving the tubes;

and a support for the housing arranged to rotate the housing about the axis of the plate such that the biological sample within the tubes does not settle.

2. The rack according to Claim 1 wherein the mounting member comprises a first plate having a plurality of holes which are arranged to receive the main body such that the main body is located within the holes on the plate and a second plate which is located adjacent to the first plate and has a plurality of holes coaxial with the holes on the first plate such that the holes on the second plate are arranged to receive the tubes.

3. The rack according to Claim 2 wherein a third plate is located on a respective side of the second plate relative to the first plate on the axis which has a plurality of holes each having an axis parallel to the axis of the holes on the first plate but are staggered such that each axis is side by side on a respective plate, the third plate is arranged to receive a second plurality of tubes such that the main body is located within the holes and are located within a second plurality of holes on the second plate.

4. The rack according to Claim 1 wherein the housing is generally cylindrical and there is provided a cradle is arranged to receive the housing such that the housing can be rotated on the cradle.

5. The rack according to Claim 4 wherein the cradle has a frame

having a first side and a second side wherein a plurality of roller bars are arranged in an arc about the axis of mounting member are connected to each side such that the rollers have an axis parallel to the axis of the housing when the housing is located thereon.

6. The rack according to Claim 1 wherein a shaft is located on the axis of the housing and extends horizontally therethrough and is coupled to a hanger on the support member at one end and is coupled to a rotating mechanism at an opposed end, wherein the rotating mechanism is arranged to rotated the shaft about the axis such that the housing is rotated.

7. A biological sample storage rack comprising

a housing;

a plurality of tubes containing the biological sample are located at the housing;

the tubes having a main body being cylindrical in shape;

the housing having a first plate with a plurality of holes which are arranged to receive the main body such that the main body is located within the holes on the plate and a second plate which is located adjacent to the first plate and has a plurality of holes coaxial with the holes on the first plate such that the holes on the second plate are arranged to receive the tube.

8. The rack according to Claim 7 wherein a third plate is located on an opposite side of the second plate relative to the first plate on the axis which has a plurality of holes each having an axis parallel to the axis of the holes on the first plate but are staggered such that each axis is side by side on a respective plate, the third plate is arranged to receive a second plurality of tubes such that the main body is located within the holes and the nozzles on the tubes are located within a second plurality of holes on the second plate such that the nozzles are facing inward

adjacent to each nozzle.

9. A semen storage rack comprising:

an upright frame arranged to be located within a refrigerator;

a plurality of racks pivotally mounted to the frame arranged to tilt thereon;

a plurality of trays each arranged to be located on a rack;

at least one container arranged to contain semen and is located in the tray; and,

a drive mechanism arranged to tilt each rack about an axis such that the contents of the container does not settle.

10. The rack according to Claim 9 wherein the racks are spaced one on top of the other on the frame.

11. The rack according to Claim 10 wherein the racks are mounted on support beams sufficiently vertically spaced so that a tray can be slid onto a rack.

12. The rack according to Claim 11 wherein there is two rows of racks.

13. The rack according to Claim 9 wherein a connector rod is pivotally mounted to each rack such that the racks are tilted simultaneously by the drive mechanism.

14. The rack according to Claim 12 wherein there is two connector rods each being pivotally mounted to a respective row of racks such that each row of racks are tilted simultaneously.

15. The rack according to Claim 14 wherein a cross connector rod is pivotally mounted to each connector rod on a respective row of racks such that the rows tilt simultaneously.

16. The rack according to Claim 9 wherein the drive mechanism is a

motor which drives a cam for providing upwards and downwards rocking motion to each rack.

17. The rack according to Claim 9 wherein the containers are elongate tubes positioned on the tray such that the containers are transverse to the axis of the racks for mixing the fluid end to end within the container.

18. A method of storing semen includes:

providing the semen in a plurality of storage tubes;

providing a rack;

locating the rack in a refrigerator;

providing a carrier for a plurality of storage tubes;

locating the carrier on the rack; and,

operating the rack to effect movement of the carrier.